



KAMARAJ IAS ACADEMY
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Radioactive pollution in water

Published On: 19-01-2023

Why is in news? Pacific island nations urge Japan to postpone release of water from Fukushima nuclear power plant

Pacific island nations are urging Japan to postpone the release of water from the stricken Fukushima nuclear power plant **due to concerns that fisheries will be contaminated**, according to the Pacific Island Forum (PIF).

The Japanese government announced last week that water from the destroyed Fukushima nuclear power plant could be released into the sea this spring or summer, alarmed island nations still dealing with the fallout from decades of nuclear testing.

After treatment, Japan approved the release of more than 1 million tonnes of water from the site into the ocean in April 2021.

The PIF, a regional bloc of 17 island nations, claims that releasing the water will have a significant **impact on fishing grounds** that are vital to island economies and supply up to **half of the world's tuna fish**.

The Fukushima Daiichi Nuclear Power Plant is a **disabled nuclear power plant** located in Japan. The plant **suffered major damage from the magnitude 9.0 earthquake and tsunami** that hit Japan on March 11, 2011.

Japan is using an extensive pumping and filtration system known as “**ALPS (Advanced Liquid Processing System)**”. The ALPS process is used to **extract tonnes of newly radioactive water** each day. Further, it **also filters out most radioactive elements**.

The ALPS process removes most of the radioactive isotopes. It will make the nuclear content in water levels lower than the international safety guidelines for nuclear plant wastewater.

However, it **cannot remove some radioactive isotopes**, Such as **tritium**, a radioactive isotope of hydrogen.

Japan is planning to release the contaminated water containing tritium into the ocean.

Tritium considered to be relatively harmless because it does not emit enough energy to penetrate human skin. But when ingested tritium can create cancer risks.

Some scientists have pointed out that the long-term effects on marine life are unknown. Especially a low-dose exposure to such large amounts of material like tritium.

Further, the experts also point out the ill effects of radioactive isotope **Strontium 90**. Strontium released in the ocean can start to **concentrate in the bones of both fish and humans**, thereby increasing cancer risks.

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